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gories in Table 2 correspond as follows to the classification of the 1930 census:

Employers, managers, and own-account workers = företagare och likställda.

Administrative, clerical, and technical workers = funktionärer.

Operatives = arbetare.

Family workers in establishments operated by their father (or brother) have been excluded if classified as "arbetare." It was not possible to exclude those classed as "funktionärer." Retired persons were excluded.

The classification published in the 1940 census was somewhat different. The new category "förvaltningspersonal" had to be divided. The subcategory "företagsledare" (managers) was added to the category "företagare" to form "employers, managers, and own-account workers." The remaining "förvaltningspersonal" gave "administrative, clerical, and technical workers."

Table 3

Australia:

(1) Australia. Commonwealth Bureau of Census and Statistics. *Census of the Commonwealth of Australia, 30th June 1933.* Part XXIV. *Grade of Occupation.* Canberra, 1937. P. 1658.

(2) Australia. Commonwealth Bureau of Census and Statistics. *Census of the Commonwealth of Australia, 30th June 1947.* Part XIX. *Occupational Status.* Canberra, 1951. P. 1531.

The unemployed have been included with employees in the computation of Table 3.

Table 4

Switzerland:

(1) Switzerland. Eidgenössisches Statistisches Amt. *Bevölkerungsbewegung in der Schweiz, 1945–1948, Text. Statistische Quellenwerke der Schweiz.* Heft 224. Bern, 1951. P. 22.

SOCIAL STRATIFICATION AND SCHIZOPHRENIA

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THIS paper is a preliminary analysis of the distribution of schizophrenic and paranoid disorders by socio-economic class in the New Haven, Connecticut, community.[1] The data were assembled by a research team composed of sociologists,[2] psychiatrists,[3] and a clinical psychologist.[4] Since methodological procedures have been described in previous papers,[5] only the principal research operations are summarized here. First, the class structure of the community was delineated by the sociologists; second, they interviewed, as controls, a five per cent sample of the community's population; third, the team took a census of psychiatric patients; fourth, both the sample population and the psychiatric patients were classified into five socio-economic strata.

THE PROBLEM

When the data were tabulated it was observed that the 847 schizophrenic patients located by the *Psychiatric Census* were largely from the lowest stratum (class V). The contribution of each class or stratum to the patient population was measured by an *Index of Current Prevalence*, in which a distribution of patients

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[1] The New Haven community includes the city of New Haven and all of West Haven and East Haven, and the built-up portions of the towns of North Haven and Hamden. The population of the community was some 240,000 in 1950. A full analysis of the data outlined in this paper will be presented in the authors' forthcoming *Psychiatry and Social Class.*

[2] August B. Hollingshead and Jerome K. Myers.

[3] F. C. Redlich, B. H. Roberts, L. Z. Freedman, and Leslie Schaffer.

[4] Harvey A. Robinson.

[5] For a discussion of methodological procedures see August B. Hollingshead and Fredrick C. Redlich, "Social Stratification and Psychiatric Disorders," *American Sociological Review,* 18 (April, 1953), pp. 163–169, and F. C. Redlich, A. B. Hollingshead, *et al.,* "Social Structure and Psychiatric Disorders," *American Journal of Psychiatry,* 109 (April, 1953), pp. 729–734.

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proportionate to the community's population would produce an *Index* for each class of 100. Instead of an equal representation, however, the following measures were found: the *Index* in class I was 23; class II, 33; class III, 48; class IV, 84; and class V, 246. The Index in class V was eleven times higher than in class I.

Two alternative hypotheses to account for these differences are here examined: (1) schizophrenics are geographically mobile and socially mobile downward, hence the concentration of patients in class V; (2) the *Index of Current Prevalence* reflects differences in treatment received in the several classes and responses to it.

ANALYSIS OF THE DATA

Hypothesis 1: Social Mobility. The possible effects of geographic and social mobility on schizophrenia were revealed originally by the finding of Faris and Dunham that schizophrenics, upon first admission to a mental hospital, come principally from the most deteriorated ecological areas of cities.[6] Some critics of this conclusion argued that the patients drifted to these areas as a result of their disorders[7] and thus the high rates of hospital admissions from these areas are illusory.[8] This drift hypothesis assumes that persons who develop one of the schizophrenic disorders are so ill that they cannot maintain normal social relations, and so drift into both geographic and downward social mobility. The drift hypothesis also assumes that the schizophrenics originate randomly in the population. If these assumptions are correct, one should find a large concentration of geographically transient and socially downward mobile persons in the class V patient group.

The present study tests both the geographic and the downward mobility aspects of the drift hypothesis. Three tests were made of the geographic part of the hypothesis. First, the nativity of the adult patients was compared with the nativity of the total adult population of the community to see if there was an association between nativity and schizophrenia. This comparison was made because immigration represents the largest geographic movement. Conceivably there may also be some relationship between the "culture shock" associated with immigration, and schizophrenia. Since no significant association is found between nativity and the presence or absence of schizophrenia in the population, the study gives no support to the hypothesis of a functional linkage between international migration and the current treated prevalence of schizophrenia.[9]

The second step in the test of the mobility hypothesis is the examination of where the native-born patients of each class had been born and reared, in order to determine if there is a significant relationship between class position and geographic mobility within the United States.

The data in Table 1 show that movement from community of birth and rearing, to community of present residence (New Haven), is not a significant factor in the current prevalence pattern. Some 65 per cent of the native-born patients had been lifelong residents of the community, and 35 per cent were inmigrants. If the geographic transiency hypotheses were correct, these inmigrants should be concentrated in class V. The facts are otherwise. If the class I and class II patients, who had been born and reared in the New Haven community, are compared with the

TABLE 1. PLACE BORN AND REARED FOR NATIVE-BORN SCHIZOPHRENICS BY CLASS

Origin	I and II	III	IV	V
New Haven community	12	51	212	153
New England	7	14	49	46
United States	8	15	40	51
Total	27	80	301	250

Chi-square=11.8971, P greater than .05.

[6] R. E. L. Faris and H. Warren Dunham, *Mental Disorders in Urban Areas,* Chicago: University of Chicago Press, 1939.

[7] See the review of *Mental Disorders in Urban Areas* by A. Myerson, *American Journal of Psychiatry,* 96 (January, 1940), pp. 995–997.

[8] A. J. Jaffe and E. Shanas, "Economic Differentials in the Probability of Insanity," *American Journal of Sociology,* 44 (January, 1935), pp. 534–539.

[9] The figures were: patients, 643 native-born; 193 foreign-born; general population, 135,568 native-born; 34,900 foreign-born. Chi-square=3.4871, P greater than .05.

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class V patients, who also had been born and reared in the community, it is revealed that only 44 per cent of the members of classes I and II were native to New Haven, and that a much higher proportion—61 per cent of the class V members—had been lifelong residents of the community. Thus, it may be concluded that the class V patients were not largely transients who had drifted to the New Haven community. The next inquiry concerns whether the class V patients had drifted to the slums in the course of their lives. The answer is crucial to the test of the "downward drift" hypotheses. For this purpose, the investigators obtained residential histories of the 428 patients who had lived in the community all of their lives. After the individual histories were compiled by address, there was assigned to each address the ecological value of the area as determined by the studies of Davie [10] and Myers.[11] After the residential movements of the patients had been tabulated and evaluated by ecological areas, the conclusion was clear that most of the members of class I and II have lived always in the same types of ecological areas, and that the members of class V have also lived in the slums all their lives. The members of classes III and IV show greater irregularities, but there is no evidence of a significant drift to the slums with the onset of schizophrenia.[12] The present data thus clearly support the position Faris and Dunham developed in their examination of the validity of the drift hypotheses as an explanation of the high commitment rates of schizophrenics from poor ecological areas. [13]

A final test of the mobility hypothesis is made by examining data indicating whether schizophrenics are socially downward mobile. A first step was to search the family histories of the patients to learn the class positions of their families of orientation. Then each patient was located in the class system. Enough evidence was found to determine the class positions of the families of 92 per cent of the patients. The data are summarized in Table 2. The

TABLE 2. SOCIAL MOBILITY AMONG SCHIZOPHRENICS THROUGH TWO OR MORE GENERATIONS BY CLASS

Evidence of Mobility	Class of Patients			
	I and II	III	IV	V
Patient and family stable	20	54	322	340
Patient upward from family	7	19	6	...
Patient downward from family	1	2	3	4
Family history insufficient to determine mobility	1	8	21	39
Total	29	83	352	383

most significant points in the table are: first, that 91 per cent of the patients, whose histories were adequate for our purposes, were in the same class as their families of orientation; second, that only 1.3 per cent of the patients were in a lower class than their families, whereas 4.4 per cent were in a higher class; and third, that 89 per cent of the class V patients came out of class V families, but only 69 per cent of the class I and II patients originally belonged to class I and II families.

The result clearly shows that few schizophrenics move downward in class level. Considering together the facts of Tables 1 and 2, the conclusion is obvious that neither geographic transiency nor downward social mobility can account for the sharp class differences in the distribution of schizophrenic patients revealed by the *Index of Current Prevalence.*

Hypothesis 2: Quality of Treatment. This hypothesis assumes that the *Index of Current Prevalence* reflects both the types of treatment patients in a given class receive, and the ways they respond to it. It is tested here by several operations. First an *Index of Prevalence* was constructed for various numbers of years patients had been in treatment, to see if the index varied through these years. The results are given in Table 3.

[10] M. R. Davie, "The Pattern of Urban Growth," in *Studies in the Science of Society,* G. P. Murdock (editor), New Haven: Yale University Press, 1937, pp. 133–161.

[11] J. K. Myers, "The Homogeneity of Census Tracts: A Methodological Problem in Urban Ecological Research," *Social Forces* (in press).

[12] The residential movement of schizophrenic patients and a sub-sample of controls matched for age and class position will be presented in a forthcoming paper by August B. Hollingshead.

[13] For a discussion of these points, see Robert E. L. Faris, *Social Disorganization,* New York: The Ronald Press, 1948, pp. 230–231.

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The *Index of Current Prevalence* varies greatly in each class by duration of treatment. In classes I and II the *Index* is highest during the first two years, from the third year through the twentieth year it is stable, and after 21 years of treatment it drops again. The *Index* in class V, however, drops from the first to the second year, rises again during years 3–5, and continues from this point to increase with the length of time patients have been in treatment. Clearly, the several classes respond in significantly different ways to the treatment process.

TABLE 3. INDEX OF PREVALANCE BY DURATION OF TREATMENT IN EACH CLASS

Years in Treatment	Index Numbers by Class			
	I and II	III	IV	V
1	84	43	102	176
2	102	52	105	144
3–5	26	71	101	175
6–10	25	60	101	194
11–20	26	20	86	280
21 and above	10	40	70	308
Index of current prevalence	29	48	84	246

The second step in the test of the treatment hypothesis is to determine if treatment is actually different from one class to another. This test is divided into three phases: (1) how the patient came into treatment, (2) where he was treated, and (3) how he was treated.

Schizophrenics come to a psychiatrist either through self-selection or coercion. If a patient came to a physician or hospital either of his own will or through the influence of his family, the contact is here termed self-selection. When the contact involved the police, the sheriff, or the courts, it is classified as coercion. The frequencies of each type of contact in the various classes are summarized in Table 4.

The data in Table 4 demonstrate that the lower the class the greater the tendency for schizophrenic patients to reach the attention of a psychiatrist through the instrumentality of the law. Conversely, self-selection contacts are associated with higher class positions.

The places where patients are treated differ as sharply from class to class as are the ways they get to a psychiatrist. Class I and II patients are most frequently treated by private practitioners, or in private mental hospitals. Only a few reach a state hospital, and then only after they have been in private treatment for years and their funds have been exhausted. Class III patients usually start their treatment with a practitioner or in a private hospital, but after about a year approximately one-half go into a state hospital. In class IV, from 12 to 15 per cent begin treatment with a practitioner or enter a private hospital for a short time, then they go to a

TABLE 4. SELF-SELECTION AND COERCION IN FIRST CONTACTS WITH A PSYCHIATRIST BY CLASS

Type of Contact	I and II	III	IV	V
Self-selection	21	25	67	54
Coercion	8	58	285	329
Total	29	83	352	383

Chi-square=64.2902, P less than .001.

state hospital; the vast majority go directly to a state hospital. About 95 per cent of the class V patients are taken to a state hospital from their homes. Since a person may be committed voluntarily to a state hospital in Connecticut, coercion is presumably not necessary. The differences in place of treatment by class are a function of the class cultures rather than the legal system.

Because therapy in the first years of contact may be a crucial factor in understanding the concentration of patients in class V, the present discussion of therapy is limited to the three principal therapies received by patients who began their treatment after January 1, 1946: hospitalization only, organic therapies, and psychotherapies. Therapy data on these cases are summarized in Table 5. These patients represent the following percentages of all schizophrenic patients in each class: classes I and II, 41; class III, 29; class IV, 23; class V, 16.

The data in Table 5 show that the *type of therapy* a patient receives, during the first five years of treatment, is related significantly to class position. The vast majority of patients in each class received one of the organic treatments or a type of

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psychotherapy. The organic therapies—drugs, surgical procedures such as lobotomy, and shock, mainly, electric shock—were most strongly associated with class V patients. Seventy per cent of the class V schizophrenics were treated with an organic therapy, compared with 65 per cent of patients from class IV, 54 per cent from class III, and only 17 per cent from classes I and II. On the other hand, the psychotherapies were most strongly associated with class I and II patients. Some 83 per cent of these two classes received individual psychotherapy, but only 9 per cent of persons of class V were treated by the use of individual psychotherapy; however, an additional 9 per cent received some group psychotherapy. The percentages of patients treated by psychotherapy in classes III and IV ranged between these extremes. The patients in the "none" category of Table 5 were hospitalized, but they did not receive any specific psychiatric therapy beyond custodial hospital care.

TABLE 5. TYPES OF THERAPY SCHIZOPHRENICS RECEIVED BY CLASS WHO WERE IN TREATMENT FOR 5 YEARS AND LESS *

Type of Therapy	I and II	III	IV	V
None	..	3	7	7
Organic	2	13	59	40
Psychotherapy, individual	10	4	16	5
Psychotherapy, group	..	4	8	5
Total	12	24	90	57

Chi-square=38.9143, P less than .001.

* The chi-square for 6–19 years of treatment by class with 6 degrees of freedom was 30.1769, P less than .001; for 20 years and more the chi-square with 6 degrees of freedom was 7.7307, P greater than .20. After twenty years of illness the class differences in therapy disappear, because practically all patients are in the "back wards" of state hospitals, where they receive no treatment other than custodial care.

CONCLUSIONS

The present study indicates there is a highly significant relationship between class position and the prevalence of treated schizophrenic patients in the population of the New Haven community. To explain this relationship the data were analyzed in terms of two hypotheses: (1) schizophrenic patients are geographically and socially mobile; (2) current prevalence is a measure of the responses patients in the several classes make to the treatment process. The mobility hypothesis was not supported by the tests, but the hypothesis of differential responses to the treatment process was supported. This later hypothesis, however, does not throw light upon the fundamental question of why, from the beginning of treatment, schizophrenic patients are more highly concentrated in class V than in the higher classes. A definitive answer to this question can come only from further research.

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